COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION
DIVISION OF PUBLIC UTILITY REGULATION

STAFF REPORT

CASE NO. PUR-2020-00120

COMMONWEALTH OF VIRGINIA, *ex rel.* STATE CORPORATION COMMISSION, *EX PARTE*: IN THE MATTER OF ESTABLISHING RULES AND REGULATIONS PURSUANT TO § 56-585.5 E 5 OF THE CODE OF VIRGINIA RELATED TO THE DEPLOYMENT OF ENERGY STORAGE

NOVEMBER 16, 2020

DIVISION OF PUBLIC UTILITY REGULATION

Commonwealth of Virginia, ex rel. State Corporation Commission
Ex Parte: In the matter of establishing rules and regulations pursuant to
§ 56-585.5 E 5 of the Code of Virginia related to the deployment of energy storage

CASE NO. PUR-2020-00120

INTRODUCTION

During its 2020 Session, the Virginia General Assembly enacted the Virginia Clean Economy Act ("VCEA").[1] Among other things, the VCEA, in Code § 56-585.5 E, requires Appalachian Power Company ("APCo") and Virginia Electric and Power Company ("Dominion") to petition the State Corporation Commission ("Commission") for approval to construct or acquire 400 megawatts ("MW") and 2,700 MW, respectively, of new utility-owned energy storage resources by 2035. Section 56-585.5 E 5 further provides in part that:

> By January 1, 2021, the Commission shall adopt regulations to achieve the deployment of energy storage for the Commonwealth required in subdivisions 1 and 2, including regulations that set interim targets and update existing utility planning and procurement rules. The regulations shall include programs and mechanisms to deploy energy storage, including competitive solicitations, behind-the-meter incentives, non-wires alternatives programs, and peak demand reduction programs.

On June 29, 2020, the Commission established this proceeding for the purpose of complying with this statutory requirement and sought comment on several questions raised by § 56-585.5 E 5 of the Code. The Commission directed APCo and Dominion to submit comments and permitted any other interested person or entity to submit comments. In addition to answering specific questions, commenters were also permitted to propose specific regulations.

[1] Senate Bill 851, 2020 Va. Acts ch. 1194, and identical House Bill 1526, 2020 Va. Acts ch. 1193 (effective July 1, 2020).

Based on comments and draft regulations filed in this proceeding, the Commission's Staff ("Staff") prepared draft rules ("Proposed Rules"). On September 11, 2020, the Commission appended the Proposed Rules to an Order for Notice and Comment ("Order") giving interested persons an opportunity to file written comments on, propose modifications or supplements to, or request a hearing on the Proposed Rules. Further, a copy of the Proposed Rules was sent to the Registrar of Regulations for publication in the *Virginia Register of Regulations*. Among other things, the Order also directed the Staff to file on or before November 16, 2020, a report on or a response to any comments, proposals, or requests for hearing submitted to the Commission on the Proposed Rules. This Staff Report is filed in response to the Commission's Order. Attachment A contains certain revisions to the Proposed Rules ("Revised Proposed Rules") recommended by Staff after reviewing the comments provided.

Staff notes that the VCEA also directs the Commission to create a task force ("Energy Storage Task Force") to evaluate and analyze the regulatory, market, and local barriers to the deployment of distribution and transmission-connected bulk energy storage resources to help integrate renewable energy into the electrical grid, reduce costs for the electricity system, allow customers to deploy storage technologies to reduce their energy costs, and allow customers to participate in electricity markets for energy, capacity, and ancillary services. The Commission is required to submit a copy of the task force's evaluation and analysis to the General Assembly no later than October 1, 2021. Preparatory activities have begun at the Commission toward establishing this Energy Storage Task Force. In several instances discussed below, Staff recommends issues raised by comments be further considered by the Energy Storage Task Force rather than incorporating specific changes into the Proposed Rules at this time.

COMMENTS RECEIVED

In response to the Commission's Order, comments were received from the following 11 entities: Energy Storage Stakeholders ("ES Stakeholders");[2] Solar Stakeholders;[3] Data Center Coalition;[4] Office of the Attorney General's Division of Consumer Counsel ("Consumer Counsel"); Environmental Advocates;[5] Virginia Electric and Power Company and Appalachian Power Company, jointly ("Joint Commenters"); Delorean Power LLC ("Delorean"); Mitsubishi Power Americas, Inc. ("Mitsubishi"); Sierra Club; Virginia Department Of Mines, Minerals And Energy ("DMME"); and GlidePath Development LLC ("GlidePath"). Comments were also received jointly from the following members of the Virginia General Assembly: Senator Jennifer McClellan, Senator Scott Surovell, Delegate Rip Sullivan, Delegate Jay Jones, Delegate Mark Keam, and Delegate Alfonso Lopez ("GA Members"). No requests for hearing were received by the due date. The following is a discussion of certain pertinent comments.[6]

Section 20: Definitions

Based on the comments received, Staff has modified certain definitions as shown in the Revised Proposed Rules.

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[2] The ES Stakeholders include the U.S. Energy Storage Association, Virginia Advanced Energy Economy, the Maryland, D.C, and Virginia Solar Energy Industries Association ("MDV SEIA") and the Solar Energy Industries Association ("SEIA").

[3] The Solar Stakeholders include the MDV SEIA and SEIA. The Solar Stakeholders state they "are providing supplemental comments to the Energy Storage Stakeholders, specifically to focus on distributed energy resources, behind-the-meter storage and environmental justice considerations." Solar Stakeholders comments at 1.

[4] The Data Center Coalition is the national trade association for the data center industry.

[5] Environmental Advocates include the Southern Environmental Law Center, Appalachian Voices, and the Piedmont Environmental Council.

[6] Given the breadth of comments received and timing of the Staff Report, Staff will not address every comment made by each commenting party. This necessary omission implies neither endorsement nor rejection of any such comment.

Section 30: Minimum Interim Targets for Energy Storage Deployment

Several commenters express dissatisfaction with the interim targets set out in the Proposed Rules, arguing that the targets are too heavily weighted towards the end of the statutory period and should be revised to produce more energy storage deployment earlier.[7] Various reasons are given for recommending an accelerated deployment schedule.[8] Sierra Club argues that the Proposed Rules establish minimum increments for the deployment of energy storage at a slower pace than that required for renewable generation under the VCEA's Renewable Portfolio Standard ("RPS"), and recommends that the schedule for proposing storage under the Proposed Rules be accelerated.[9] Several proposals are offered for an accelerated deployment schedule as shown below.[10]

Table 1: Proposed Interim Targets for Energy Storage Deployment

Entity	Proposed Interim Targets
Energy Storage Stakeholders[11]	APCo: By December 31, 2022: 100 MW By December 31, 2025: 200 MW By December 31, 2035: 400 MW Dominion: By December 31, 2023: 400 MW By December 31, 2026: 900 MW By December 31, 2035: 2,700 MW.

[7] Sierra Club comments at 2; GA Members comments at 2; ES Stakeholders comments at 3-4; Delorean comments at 3; Solar Stakeholders comments at 2.

[8] For example, ES Stakeholders state: (i) significant early cost reductions in storage installations will occur as a result of learning-by-doing via deployment; (ii) as Virginia's utilities make multi-decadal investment decisions in the near term, delaying serious consideration of energy storage as a near-term investment option will lock in other investments that may reduce the utility of storage in the future; (iii) if storage deployment is limited in the next decade, Virginia will miss out on critical benefits of storage to its electricity grid in the intervening years before deployment ramps up in 2030, in particular for resilience and integration with the transportation sector and other beneficial electrification; and (iv) a limited storage deployment in early years will prevent Virginia from gaining experience with a diversity of customer benefits, interconnection types, technologies, ownership models, and customer benefits. *See* ES Stakeholders comments at 4-6.

[9] Sierra Club comments at 2.

[10] Although Sierra Club recommends that energy storage deployment proposals should be submitted approximately in line with the required rate of onshore renewable energy development, Sierra Club provides no specific interim targets. *See* Sierra Club comments at 2.

[11] ES Stakeholders comments at 20.

Delorean Power[12]	APCo: By December 31, 2023: 60 MW By December 31, 2025: 120 MW By December 31, 2027: 180 MW By December 31, 2029: 240 MW By December 31, 2031: 300 MW By December 31, 2033: 360 MW By December 31, 2035: 420 MW Dominion: By December 31, 2023: 400 MW By December 31, 2025: 800 MW By December 31, 2027: 1,200 MW By December 31, 2029: 1,600 MW By December 31, 2031: 2,000 MW By December 31, 2033: 2,400 MW By December 31, 2035: 2,800 MW
Solar Stakeholders[13]	APCo: By December 1, 2025: 100 MW Dominion: By December 1, 2025: 400 MW

Staff takes no position on whether or how the currently proposed interim targets need to be adjusted and believes it is a policy question best addressed by the Commission. Other recommendations made regarding the interim targets include the following.

1. Require that at least 25 percent of the non-utility requirement come in the form of a Purchase Power Agreement ("PPA") or other service agreement.[14] GlidePath goes further to recommend that 100 percent of the third-party projects be procured via long-term PPA-style mechanisms.[15] Staff, however, finds no basis in the statute to support

[12] Delorean comments at 4. The proposed targets slightly exceed the VCEA minimum total goals set for 2035.
[13] Solar Stakeholders comments at 2.
[14] Delorean comments at 5. Delorean states this would ensure competition in the state and enable innovative business models and a robust market for non-utility energy storage companies.
[15] GlidePath comments at 3.

these proposed limitations and is concerned they could unduly limit energy storage deployment.

2. Interim targets should have specific, individual requirements for distribution-connected, behind-the-meter, and standalone energy storage.[16] As discussed further below, the VCEA establishes a goal of installing at least 10 percent of energy storage projects behind the meter.[17] It does not, however, establish any goal or requirements related to distribution-connected and standalone energy storage. Staff does not believe these limitations are necessary at this time and is concerned they could unduly limit energy storage deployment.
3. Energy storage located in the service territory of a municipal utility that purchases electricity primarily from a Phase I or Phase II Utility should count toward the interim targets for that utility.[18]
4. Dominion and APCo oppose the language in the Proposed Rules stating that "a Phase I or Phase II Utility's acquisition of energy storage facilities and purchases of capacity from its own utility-affiliated interests shall not count towards the 35 percent of energy storage facilities required to be (i) purchased from a party other than the utility or (ii) owned by a party other than a public utility with the capacity from such facilities sold to the utility."[19] Joint Commenters argue this provision is not supported by the statutory language in Va. Code § 56-585.5 E 5 and assert that imposing such a limitation would be adding language to the statute and be contrary to the legislative intent. They further

[16] Delorean comments at 3-4. Delorean claims this was done in California and has led to benefits including a diversity of storage use cases and a variety of innovative businesses across the supply chain.
[17] Code § 56-56-585.5 D 4.
[18] ES Stakeholders comments at 20.
[19] Joint Commenters comments at 2-5.

assert that the Affiliates Act, Va. Code § 56-76 *et seq.*, provides the necessary protection to ensure that any acquisition of energy storage facilities and purchases of capacity pursuant to Va. Code § 56-585 E 5 and the Proposed Rules will be the most competitively-priced and beneficial to utility customers. On advice of counsel, Staff recommends this language be removed and has removed it in the Revised Proposed Rules. Staff further notes that while Environmental Advocates support the exclusion of utility affiliates from the 35 percent third party procurement requirement, they recommend that if the Commission allows a utility to procure energy storage facilities from utility-affiliated interests, then "the Commission should require each and every contract to go through a separate Affiliates Act review pursuant to Va. Code § 56-77. No utility should be allowed to skirt the Affiliates Act by using a 'master contract' or some other vehicle that allows an unregulated affiliate or subsidiary to enter into multiple contracts on the regulated utility's behalf."[20] Staff does not oppose this recommendation of Environmental Advocates in concept; however, Staff does not believe such recommendation should be incorporated into the Proposed Rules.

Behind the Meter Energy Storage Goals

Several commenters recommend that the Commission explicitly incorporate the goal of having 10 percent of the procured storage be installed behind the meter ("BTM") as provided by the VCEA.[21] This BTM goal is found in the Code language requiring that each utility annually submit a plan and petition for approval for the development of new solar and onshore wind

[20] Environmental Advocates comments at 16.
[21] *See* Va. Code § 56-585.5 D 4. DMME comments at 1; Solar Stakeholders comments at 3; ES Stakeholders comments at 6.

generation capacity (§ 56-585.5 D 4).[22] Since this goal is already a statutory provision that the utilities must adhere to, it does not need to be incorporated into the Proposed Rules. Furthermore, it is potentially subject to future revisions by the Virginia General Assembly. As such, Staff does not believe it is necessary to incorporate this requirement into the Proposed Rules.

Section 40: Procurement of Energy Storage Projects by Phase I and Phase II Utilities

Access to Electric System Data

Some commenters have recommended that utilities should provide all bidders equitable access to relevant electric system data, with appropriate confidentiality safeguards in place for privacy, system security, and public safety, and that utilities should publish the method and criteria used to evaluate offers in advance so as not to advantage any party over another.[23] Staff agrees with these recommendations and includes them in the Revised Proposed Rules.

Notice Period for Requests for Proposals

Delorean and ES Stakeholders recommend that the posting period for Requests for Proposals ("RFPs") be increased from 45 calendar days to 90 calendar days prior to the closing of such RFPs.[24] Staff believes an extension of the posting period will be beneficial to interested parties but recommends the posting period be increased to 60 calendar days.

[22] This Plan is also referred to as the annual renewable portfolio standard plan ("Annual RPS Plan"). Pursuant to Va. Code § 56-585.5 D 4, the Annual RPS Plan must include, among other things, "the utility's plan to meet the energy storage project targets of subsection E [of Code § 56-585.5] including the goal of installing at least 10 percent of such energy storage projects behind the meter."

[23] Data Center Coalition comments at 6; ES Stakeholders comments at 8. According to commenters, this would provide third parties a reasonable opportunity to evaluate a utility's selection.

[24] Delorean comments at 6; ES Stakeholders comments at 20.

Bring Your Own Device Program

As a best practice, ES Stakeholders recommend the creation of open access programs like the "Bring Your Own Device" program, stating that "these have proven best for simplest, most customer-friendly programs for driving value for behind-the-meter storage systems and unlocking the most value of grid services these systems can provide."[25] Staff does not disagree that such programs could potentially provide benefits, but believes this topic would be best explored during the upcoming sessions of the Energy Storage Task Force. At this point, Staff believes it would be premature to incorporate this program into the Proposed Rules.

Third-Party Administration

Multiple commenters have suggested that in order to ensure that all energy storage projects are truly competitively procured, the Commission should increase transparency in the bid selection process including by exploring the engagement of a third-party administrator to evaluate bids.[26] Although in principle Staff does not disagree with this concept, Staff believes that several questions remain unanswered about how such a process would be run in practice, including cost responsibilities and other uncertainties. Within the timeframe provided for the instant proceeding, Staff believes these details cannot be successfully worked out, and should be deferred for potential consideration during future iterations of these Rules. The same applies to certain related recommendations such as:[27]

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[25] ES Stakeholders comments at 4. According to ES Stakeholders, such customer-sited, non-utility owned battery storage-based programs can reduce costs for all ratepayers while improving resilience and will become more important as FERC Order 2222 is implemented. (*See* Fact Sheet on this Order at https://www.ferc.gov/sites/default/files/2020-09/E-1-facts.pdf.)
[26] GA Members comments at 2; ES Stakeholders comments at 8; Delorean comments at 6. As proposed, among other duties, the third-party administrator would define the evaluation process and the project selection methodology.
[27] Data Center Coalition comments at 4-5.

- Require cost-benefit analyses and identify compliance and Commission oversight procedures.[28]
- Require utilities to report on the results of completed RFPs.
- Identify procedures for evaluating the outcome of completed RFPs to determine whether the anticipated benefits to specific storage system performance were achieved and whether there are any lessons learned that might inform future RFPs.
- Provide an opportunity for interested parties to comment on or petition to hold proceedings to further shape future RFPs be contemplated.

Staff also notes that some of these recommendations may be addressed in the Energy Storage Task Force sessions, as well as the utilities' required Annual RPS Plans previously discussed.

Sections 50 (BTM Incentives), Section 60 (Non-wires Alternative Programs), and Section 70 (Peak Demand Reduction Programs)

These sections are discussed collectively herein because the comments received were generally overlapping. Some recommendations from ES Stakeholders and Solar Stakeholders are:

1. Require that utilities' proposals for these three programs include a description of how the proposed program will enable the utility to meet its energy storage targets, including the BTM goal of at least 10 percent. They also recommend that approval of a utility's proposed program be contingent upon whether the utility's proposed or approved programs for BTM incentives, non-wires alternative programs, and peak demand reduction programs will support achievement of a minimum goal of at least 10 percent BTM storage for interim and final targets.[29] Staff is not supportive of these recommendations because energy storage deployment at this nascent stage may be unduly limited if proposed programs are tied to

[28] Solar Stakeholders comments at 4; Delorean comments at 7. Delorean provides examples of benefits specific to energy storage that it believes must be included in the analysis: avoided costs to the distribution grid; avoided transmission costs; improvements to distributed energy resource and electric vehicle hosting capacity; modifications of load factor; resilience benefits; and complementary wholesale market services.
[29] ES Stakeholders comments at 10; Solar Stakeholders comments at 3.

meeting a 10 percent BTM goal. Furthermore, Staff is mindful that a utility's ability to meet the BTM goal will be dependent on customers voluntarily entering into agreements with utilities, which neither the Commission nor utilities can assure.

2. Require that any such programs be open and available to third party participation. Staff believes the Proposed Rules already require this.
3. The Commission should set deadlines for establishing an initial set of programs to ensure implementation in the near-term. Staff notes that under the Proposed Rules, utilities would be required to "address" such programs beginning in 2021. Staff assumes that programs that have not been proposed cannot be addressed. But, out of caution, such an establishment date could be added to the Proposed Rules or set by the Commission in its order in this proceeding.

Environmental Advocates recommend that the Commission limit a utility's ability to seek approval through existing demand-side management programs by requiring the utility to demonstrate that energy storage is cost competitive with other solutions available to the utility. Staff does not support this recommendation because it could limit storage use cases and unduly limit battery storage deployment at this nascent stage. Other topics not addressed in this section are those Staff believes are either beyond the scope of these regulations or are best addressed at the upcoming sessions of the Energy Storage Task Force.

Section 80: Permitting of Non-utility Energy Storage Facilities

Applicability of the Permitting Requirement

Several commenters question why the permitting requirements of the Proposed Rules apply only to non-utility owned storage and recommend that they should be made applicable to both

utility-owned and non-utility-owned energy storage facilities.[30] As noted by Delorean, "[t]he characteristics of energy storage contemplated by the proposed permitting requirements – such as environmental impact, impact on reliability, and system design and function – do not depend on whether the project is owned by a utility or a non-utility.[31] Staff notes that utility construction of electrical facilities is already encompassed in several statutes, which need not be incorporated into the Proposed Rules.

Burden of the Permitting Process

One of the most frequent comments about the Proposed Rules is that they are overly burdensome and may work against the intent of the VCEA. For instance, GA Members are "concerned that the Commission's proposed regulations for non-utility owned storage may make Virginia an inhospitable business environment for third-party developers of smaller projects."[32] They further state that "costs of compliance for these administrative and legal requirements are competitively prohibitive," requesting that the Commission limit its review of BTM storage projects to only what is required by law.[33] In the same vein, DMME questions whether the proposed licensing requirements for non-utility storage facilities are necessary to effectively regulate these projects, particularly as they appear to be onerous relative to the size of covered projects (100 kilowatts ("kW") or greater).[34]

[30] Delorean comments at 11; ES Stakeholders comments at 13; GlidePath comments at 3. Consumer Counsel notes that "§ 56-585.5 E does not set forth specific criteria for the Commission's 'necessary approvals' of utility-owned energy storage resources, and the Proposed Rules appear to be similarly silent on this point." Consumer Counsel comments at 1.
[31] Delorean comments at 11.
[32] GA Members' comments at 2.
[33] *Id.*
[34] DMME comments at 1.

Private developers also express concern about the "burden" level imposed by the permitting process.[35] Delorean states that "[t]he proposed permitting regulations in particular contemplate an onerous regime that is redundant with other development processes, not applicable to many energy storage technologies, and will be highly burdensome and costly not only for energy storage developers but also for the Commission and its staff that will have to review an increasingly voluminous number of permit applications resulting from the VCEA."[36] Environmental Advocates characterize the Proposed Rules' permitting process for non-utility energy storage facilities as "a transparent attempt to ensure non-utility storage is never built in Virginia," stating further that an "[u]nreasonable siting process bars a project from interconnecting and participating in ISO/RTO markets, which is in conflict with FERC Orders and federal law governing interstate commerce."[37] Various suggestions have been presented to help reduce the permitting burden imposed on non-utility-owned energy storage, as described later in this Report.

As an initial matter, Staff notes that the Proposed Rules are certainly not intended to curtail the private development of energy storage deployment in the Commonwealth, but rather represent a first step toward establishing sensible regulations to support a deployment of both utility and non-utility owned energy storage resources within the Commonwealth. Although certain aspects may be perceived as burdensome, they are intended to ensure that developers seeking to operate within the Commonwealth will operate safely, will not negatively impact the reliability of the electric power system, and will be ethically responsible in their interactions with Virginia consumers. In fact, certain proposed regulations are modeled on other similar rules, including those already applicable to non-storage electric generating facilities certificated by the

[35] *See, for instance,* ES Stakeholders comments at 12; Delorean comments at 2.
[36] Delorean comments at 2.
[37] Environmental Advocates comments at 24. FERC is the Federal Energy Regulatory Commission.

Commission, and to Net Energy Metering PPA Providers. In the case of the generation facility (non-storage) certification rules upon which certain Proposed Rules are based, some of those requirements are actually required by Code.[38] Nevertheless, Staff understands the concerns raised by commenters, and attempts to address several of those concerns in the Revised Proposed Rules.

Project Size Threshold for Applicability

Several commenters have suggested that the threshold level above which a permit is required for non-utility-owned storage is too low and should be increased above the 100 kW limit currently found in the Proposed Rules. The recommended threshold levels proffered by commenters are summarized in the table below.

Table 2: Suggested Threshold Levels for Permitting

Commenter	Recommended Threshold Level
Environmental Advocates[39]	20 MW
Delorean Power[40]	25 MW
Energy Storage Stakeholders[41]	20 MW

The Commission's Rules Governing the Filing Requirements in Support of Applications for Authority to Construct and Operate an Electric Generation Facility[42] have a threshold of 5 MW to trigger permitting requirements, below which a letter notification may be filed with the Director of Public Utility Regulation.[43] Staff recommends that the Commission consider increasing the threshold to trigger permitting requirements from 100 kW to 1 MW and has included that threshold in the Revised Proposed Rules. Staff believes this level may be appropriate given the nascent stage

[38] An example is the requirement for a determination that a facility's interconnection will not negatively impact the reliability of the electric power system.
[39] Environmental Advocates comments at 23.
[40] Delorean comments at 12.
[41] ES Stakeholders comments at 12.
[42] 20 VAC 5-302-10 *et seq.*
[43] *See* 20 VAC 5-302-10. Note that generation facilities may exceed 1,000 MW in size.

of battery deployment in Virginia. As greater experience with the deployment of batteries is gained, the Commission could revisit this threshold in the future.

Removal of Certain Permit Application Requirements

To further streamline the permitting process, some commenters recommend that certain changes be made to the evaluation process used for approval of permit applications:

1. Remove the requirement for a Commission determination that the energy storage facility will have no material adverse effect upon reliability of electric service provided by any regulated public utility.[44] Delorean's comments are generally reflective of the viewpoints expressed on this topic, which are as follows: (i) the proposed reliability requirements duplicate oversight provided by NERC[45] and the regional electric reliability organization as well as the interconnection process and local jurisdictions; (ii) the interconnection process, which is overseen by the PJM[46] system operator at the transmission level and informed by the utility, and overseen and conducted by the utility at the distribution level, already thoroughly examines the impact of proposed energy storage projects on system reliability; and (iii) additional reliability determinations will not be necessary and the Commission will not have adequate information to make such a determination in any case. As an alternative, GlidePath recommends the Commission accept an interconnection agreement from an applicant as *de facto* evidence of maintaining system reliability and include this in the minimum project eligibility requirements.[47] Staff believes it is critical

[44] ES Stakeholders comments at 13; GlidePath comments at 4; Delorean comments at 11.
[45] NERC is the North American Electric Reliability Corporation.
[46] PJM Interconnection is a regional transmission organization that coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.
[47] GlidePath comments at 4.

for the Commission to have an assurance that an energy storage system will have no negative impact upon electric system reliability. For some applicants, the process may be duplicative of similar requirements from other regulatory or interconnection processes, in which case providing the same evidence to the Commission is simply done. For those applicants that do not fall under another regulatory scheme, it is vital that the Commission be assured of the safety of their proposed facility. Therefore, Staff believes this requirement should remain in the Proposed Rules.

2. Remove the requirement for a Commission determination that the energy storage facility does not adversely impact any goal established by the Virginia Environmental Justice Act (§§ 2.2-234 et seq. of the Code of Virginia).[48] Staff does not support removal of this requirement, in part because it is mandated by Code. Additionally, Staff does not consider this requirement to be unduly burdensome to developers, especially if it helps meet the General Assembly's goal of establishing equity in the treatment of disadvantaged communities.

3. Remove the requirement for a Commission determination that the energy storage facility is not otherwise contrary to the public interest.[49] Staff does not support this recommendation since it potentially allows approval of a project that is contrary to the public interest.

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[48] ES Stakeholders comments at 14. Delorean states it is not clear how the Commission would evaluate whether a project adversely impacts any goal established by the Virginia Environmental Justice Act. (*See* Delorean comments at 11.) GlidePath believes the requirement is too open-ended to provide certainty to developers and owners (*See* GlidePath comments at 4). Solar Stakeholders support this provision as a way to help advance environmental justice within the Commonwealth and recommends the Commission coordinate and seek counsel from the Clean Energy Advisory Board. (*See* Solar Stakeholders comments at 4-5.) DMME is also supportive of this requirement. (*See* DMME comments at 1.)

[49] Delorean comments at 12; GlidePath comments at 4. GlidePath believes this requirement can be addressed at the local permitting level, but suggests that if maintained within the Proposed Rules, then the Commission should provide clear criteria that can be objectively evaluated.

4. Remove the requirement for provision of an applicant or principal participants' financial information. ES Stakeholders believe these are duplicative of those required for the interconnection process.[50] Along the lines discussed earlier, Staff believes that proof of financial viability is important for consumer protection purposes.
5. Where any environmental information required is not applicable to a particular project or technology, allow applicants to so indicate.[51] Staff does not oppose this recommendation and has incorporated it into the Revised Proposed Rules.
6. Remove the notice and comment requirement by Commission order prior to issuance of a permit.[52] Staff does not support this recommendation. Staff believes there is merit to maintaining this notice requirement, not least of which is that it is consistent with, if not essential to, meeting environmental justice requirements.

Use of Existing Regulations

Certain commenters suggest that existing regulations could apply to non-utility storage projects and should be investigated in place of imposing new regulations, or that the Proposed Rules should be similar to existing regulations such as the Virginia Department of Environmental Quality's ("DEQ") Permit-By-Rule ("PBR") process.[53] According to GlidePath, regulations developed along the lines of the PBR process could help establish clear, concrete application criteria to be evaluated, fostering a certain level of certainty for applicants, in contrast to certain permitting requirements GlidePath perceives within the Proposed Rules.[54] GlidePath further recommends that the Commission clarify that energy storage facilities that are co-located with

[50] ES Stakeholders comments at 13.
[51] Delorean comments at 13.
[52] *Id.* at 14.
[53] DMME comments at 1-2; ES Stakeholders comments at 12; GlidePath comments at 4. The PBR currently does not apply to energy storage.
[54] GlidePath comments at 4.

renewable energy projects that have received a permit by rule from the DEQ are not required to obtain a permit or receive a Certificate of Public Convenience and Necessity ("CPCN") from the Commission. Staff does not support these recommendations. First, DEQ's permitting authority is limited to renewable resources, and does not cover energy storage. Accordingly, permitting storage falls within the Commission's purview. In addition, Staff notes the DEQ's permit does not cover generation tie-lines to generation or distribution systems, where those are components of an electrical facility including energy storage.

Delorean also recommends that the Commission "harmonize permitting requirements for energy storage with those already established for electric generation."[55] Staff notes that the Proposed Rules are based in part upon existing rules applicable to electric generation facilities (non-storage) certificated by the Commission.

In general, although considerable concerns have been expressed about the permitting process, Staff notes that this entire process is in its infancy, and that as additional experience is gained in the permitting of storage resources, future revisions to the process could be explored.

Section 90: Licensing of Energy Storage Aggregators

Joint Commenters request clarification about the meaning or intent of the language in Section 90 B 18 that requires each person applying for a license to conduct business as an energy storage aggregator to file an application that includes, among other things, "[t]he standards of conduct to which the applicant adheres or agrees to adhere to."[56] Staff notes that a similar requirement exists in other Commission rules, such as the one governing registration of Net Energy Metering Power Purchase Agreement Providers (20 VAC 5-315-77). Staff believes this

[55] Delorean comments at 10.
[56] Joint Commenters comments at 7.

requirement is needed to provide some assurance that entities seeking to conduct energy storage business within the Commonwealth are ethically responsible in their interactions with Virginia consumers.

Several commenters argue that energy storage aggregators should not be regulated by the Commission at all, or that any regulation be made applicable to only certain aggregators.[57] For example, ES Stakeholders recommend that aggregator licensing requirements apply only to aggregators of mass market energy storage systems, and that aggregators of exclusively large commercial energy storage systems be excluded from licensing requirements with the Commission. Staff does not support this recommendation at this time. Importantly, comparable licensing requirements are in place for competitive service providers and aggregators associated with retail choice under other Commission rules. These licensing requirements have not been reported to be unduly burdensome and are an appropriate consumer safeguard. Staff sees no compelling reason to exclude energy storage aggregators from the requirements of the Proposed Rules.

Annual Plan and Other Topics

Delorean makes a commendable effort to propose a detailed set of requirements for the Annual RPS Plans required of each Phase I and Phase II Utility toward meeting their energy storage targets.[58] Those recommendations are provided as an entirely new section of the Proposed Rules. Although Staff is appreciative of Delorean's effort, Staff believes the requirements of the Annual RPS Plans are best addressed in the context of the Annual RPS Plan proceedings rather

[57] Sierra Club comments at 4; ES Stakeholders comments at 14-15; Solar Stakeholders at 5; Environmental Advocates at 24.
[58] Delorean comments at 8.

than as requirements within the Proposed Rules. Staff will give Delorean's recommendations due consideration when reviewing future RPS Annual Plan filings.

Mitsubishi provides several comments primarily promoting the merits of Green Hydrogen technology as a form of energy storage, and also offers recommendations that include the following:[59]

1. Formalize the regulations to highlight the technology neutrality in energy storage qualifications under the VCEA.
2. Recognize Green Hydrogen as an energy storage technology and the importance it plays in supporting a 100 percent carbon-free grid.
3. Recognize the long-term storage attributes of Green Hydrogen Energy Storage, whether in the form of procurement carve-outs, or infrastructure public-private investment.

Regarding these recommendations, Staff believes the Proposed Rules, as drafted, are already technology neutral. Staff does not believe it is necessary to recognize any specific energy storage technologies within the Proposed Rules.

CONCLUSION

In response to the Commission's September 11, 2020 Order, Staff has analyzed the comments submitted by the responding parties and included a discussion of suggested amendments to the Proposed Rules. As previously stated, Staff believes that certain comments left unaddressed in this Report should be more fully developed and considered by the Energy Storage Task Force.

[59] Mitsubishi comments at 6.

Staff considers the Revised Proposed Rules to be a reasonable initial attempt to develop sensible regulations that promote deployment of energy storage within the Commonwealth, especially within the relatively short timeframe directed by the underlying statute. Staff notes that deployment of energy storage within Virginia is at a nascent stage, and that a measured approach to the initial deployment will ensure the deployment will maintain the reliability of the electric power system and not be financially or ethically injurious to Virginia consumers, while at the same time promoting the economic activity and clean energy goals of the VCEA. Finally, Staff believes there may be opportunities for future revisions to the rules as the deployment unfolds and experience is gained, potentially after the Energy Storage Task Force concludes its activities next year.

For the reasons discussed in this Report, Staff respectfully requests that the Commission adopt the Revised Proposed Rules, with the changes and additions contained therein.

Attachment A

Revised Proposed Rules

STATE CORPORATION COMMISSION

Chapter 335 Regulations Governing the Deployment of Energy Storage

CHAPTER 335

CHAPTER 335 REGULATIONS GOVERNING THE DEPLOYMENT OF ENERGY STORAGE

20VAC5-335-10. Purpose and applicability.

This chapter is promulgated pursuant to § 56-585.5 E 5 of the Code of Virginia to achieve the deployment of energy storage for the Commonwealth. Each Phase I and Phase II Utility is subject to 20VAC5-335-30 through 20VAC5-335-70, 20VAC5-335-120, and 20VAC5-335-130 of this chapter. Non-utility developers, owners, operators, and aggregators of energy storage are subject to 20VAC5-335-80 through 20VAC5-335-130 of this chapter. Electric cooperatives are not subject to this chapter.

20VAC5-335-20. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Behind the meter" means any system that is on the customer side of the utility service meter.

"Behind-the-meter incentive" means any incentive that encourages an end-use electric customer to implement energy storage systems that are connected to the customer side of the utility service meter, regardless of who actually owns the energy storage equipment.

"Commission" means the Virginia State Corporation Commission.

"Demand-side management program" means energy efficiency, demand response, or peak shaving programs [or pilots] approved by the commission that a utility may offer to customers pursuant to § 56-585.1 A 5 of the Code of Virginia.

"Energy storage capacity" [or "stored usable energy"] means the maximum amount of stored energy of the energy storage system (in kilowatt-hours or megawatt-hours) that can be delivered to the grid.

"Energy storage" means any technology that is capable of absorbing energy, storing that energy for a period of time, and re-delivering that energy after storage.

"Energy storage aggregator" means a person or entity that, as an agent or intermediary, (i) offers to purchase, or purchases, energy storage system capabilities; or (ii) offers to arrange for, or arranges for, the purchase of energy storage system capabilities for the purposes of combining (or aggregating) those capabilities to enable the participation of multiple energy storage systems in electricity markets where such individual systems could not participate individually.

"Energy storage facility" or "energy storage system" means an energy storage resource and any equipment, other than a transmission or distribution line, needed to interconnect the energy storage resource to the utility's electric system. This additional equipment can include, but is not limited to, switchgear, transformers, inverters, switches, cables, wires, conductors, bus work, protection devices and systems, communication and control devices and systems, fire protection systems, and environmental protection systems. [Other costs associated with the construction and operation of an energy storage facility or energy storage system may include property acquisition costs, development and study costs, or other costs necessary to complete an operative facility or system.]

"Energy storage power rating" means the total possible instantaneous discharge capability (in kilowatts or megawatts) of the energy storage system, or the maximum sustained rate of discharge that the energy storage system can achieve starting from a fully charged state to a fully discharged state.

"Energy storage project" means an energy storage facility with a specified location and an associated [~~nameplate capacity~~ energy storage capacity and energy storage power rating] .

"Energy storage resource" means a resource capable of collecting energy from the electric power grid or a power generation facility and then discharging the energy at a future point in time to provide electricity or other grid services, or a resource capable of the active or dynamic exchange of energy.

"Non-wires alternative [program] " means any electricity grid investment, project, or program that uses non-traditional transmission or distribution solutions such as distributed generation, energy storage, energy efficiency, demand response, and grid software and controls to delay or remove the need for traditional system upgrades of equipment such as transmission or distribution lines or transformers, without impacting the safety or overall performance of the electric power system.

"Peak demand reduction program" means any project or program aimed at shifting time of use of electricity from one period to another for the overall economic and reliability benefit of the electric power grid.

"Person" means any individual, corporation, partnership, association, company, business, trust, joint venture, or other private legal entity, and the Commonwealth or any municipality.

"Phase I Utility" has the same meaning as provided in subdivision A 1 of § 56-585.1 of the Code of Virginia.

"Phase II Utility" has the same meaning as provided in subdivision A 1 of § 56-585.1 of the Code of Virginia.

"Storage duration" means the amount of time an energy storage system can discharge at its energy storage power rating before depleting the stored usable energy when the system is at

maximum energy [storage] capacity. [Energy storage resources can de-rate their maximum output in order to increase energy storage duration.]

20VAC5-335-30. Minimum interim targets for energy storage deployment by Phase I and Phase II Utilities.

A. A Phase I Utility shall petition the commission for any necessary approvals to construct or acquire the level of energy storage [~~capacity~~ power rating] by the following dates:

1. By December 31, 2025, 25 megawatts;

2. By December 31, 2030, an additional 125 megawatts for a total of 150 megawatts; and

3. By December 31, 2035, an additional 250 megawatts for a total of 400 megawatts.

B. A Phase II Utility shall petition the commission for any necessary approvals to construct or acquire the level of energy storage [~~capacity~~ power rating] by the following dates:

1. By December 31, 2025, 250 megawatts;

2. By December 31, 2030, an additional 950 megawatts for a total of 1,200 megawatts; and

3. By December 31, 2035, an additional 1,500 megawatts for a total of 2,700 megawatts.

C. At least 35% of energy storage facilities placed into service by a Phase I or Phase II Utility shall be (i) purchased by the Phase I or Phase II Utility from a party other than the utility, or (ii) owned by a party other than the Phase I or Phase II Utility, with the capacity from such facilities sold to the utility. The 35% threshold shall also apply to each interim [~~targets period~~ target] identified in this section [~~and a Phase I or Phase II Utility's acquisition of energy storage facilities and purchases of capacity from its own utility affiliated interests shall not count towards this 35% threshold~~] .

D. Any type of energy storage technology shall count toward the interim targets set forth in subsections A and B of this section.

E. Each Phase I and Phase II Utility shall report on its plan to meet these interim targets and its progress toward meeting these interim targets in the proceedings established by § 56-585.5 D 4 and §§ 56-597 through 56-599 of the Code of Virginia, consistent with the requirements of each respective statute.

20VAC5-335-40. Procurement of energy storage projects by Phase I and Phase II Utilities.

A. In procuring energy storage projects, each Phase I and Phase II Utility shall use competitive bidding to the extent practicable, consistent with § 56-233.1 of the Code of Virginia.

B. Beginning in 2021 and ending in [either] 2035 or when the storage targets [set forth in section 30 of this chapter] are met, whichever is sooner, each Phase I and Phase II Utility shall sponsor at least one competitive solicitation for energy storage projects per calendar year, consistent with the following requirements:

1. The request for proposals shall quantify and describe the utility's need for energy or capacity.

2. The request for proposals shall be publicly announced and made available for public review on the utility's website at least [~~45~~ 60] calendar days prior to the closing of such request for proposals.

3. The request for proposals shall provide, at a minimum, the following information: (i) the size, type, and timing of energy storage [~~resources~~ projects] for which the utility anticipates contracting; (ii) any minimum thresholds that must be met by respondents [, consistent with established codes and standards] ; (iii) major assumptions to be used by the utility in the bid evaluation process, including environmental emission standards; (iv) detailed instructions for preparing bids so that bids can be evaluated on a consistent basis;

(v) the preferred general location of additional energy storage [~~capacity~~ projects] ; and (vi) specific information concerning the factors involved in determining the price and non-price criteria used for selecting winning bids.

4. A utility may evaluate responses to the request for proposals based on any criteria that it deems reasonable, but shall at a minimum consider the following in its selection process: (i) the status of a particular project's development; (ii) the age of existing facilities; (iii) the demonstrated financial viability of a project and the developer; (iv) a developer's prior experience in the field; (v) the location and effect on the transmission grid of an energy storage [~~facility~~ project] ; (vi) the benefits to the Commonwealth that are associated with particular projects, including regional economic development and the use of goods and services from Virginia businesses; (vii) the environmental impacts of particular resources, including impacts on air quality within the Commonwealth and the carbon intensity of the utility's generation portfolio; and (viii) how any project impacts the goals established by the Virginia Environmental Justice Act (§§ 2.2-234 *et seq.* of the Code of Virginia).

5. A utility shall maintain documentation of its reasoning for rejecting any specific response [to the requests for proposals] .

C. [Each utility shall provide, upon request, equitable access to relevant electric system data, with appropriate confidentiality safeguards in place for privacy, system security, and public safety. Access shall be provided in a timely manner such that a third parties may reasonably utilize the data to inform responses to the request for proposal.

D]. Each utility shall report on any competitive solicitations for energy storage [~~resources~~ projects] as part of the annual plan required by § 56-585.5 D 4 of the Code of Virginia.

20VAC5-335-50. Behind-the-meter incentives by Phase I and Phase II Utilities.

As part of the annual proceeding required by § 56-585.5 D 4 of the Code of Virginia, each Phase I and Phase II Utility shall address behind-the-meter incentives related to energy storage. Each Phase I and Phase II Utility shall file with the commission applications for approval of behind-the-meter incentives related to energy storage. If the utility proposes to offer any such behind-the-meter incentives to customers through a demand-side management program, the utility may seek approval through any existing processes for demand-side management programs under § 56-585.1 A 5 of the Code of Virginia, rather than through a separate proceeding under this section.

20VAC5-335-60. Non-wires alternative programs by Phase I and Phase II Utilities.

As part of the annual proceeding required by § 56-585.5 D 4 of the Code of Virginia, each Phase I and Phase II Utility shall address non-wires alternative programs related to energy storage. Each Phase I and Phase II Utility shall file with the commission applications for approval of non-wires alternative programs related to energy storage. If the utility proposes to offer any such non-wires alternative programs to customers through a demand-side management program, the utility may seek approval through any existing processes for demand-side management programs under § 56-585.1 A 5 of the Code of Virginia, rather than through a separate proceeding under this section.

20VAC5-335-70. Peak demand reduction programs by Phase I and Phase II Utilities.

As part of the annual proceeding required by § 56-585.5 D 4 of the Code of Virginia, each Phase I and Phase II Utility shall address peak demand reduction programs related to energy storage. Each Phase I and Phase II Utility shall file with the commission applications for approval of peak demand reduction programs related to energy storage. If the utility proposes to offer any such peak demand reduction programs to customers through a demand-side management program, the utility may seek approval through any existing processes for demand-side

management programs under § 56-585.1 A 5 of the Code of Virginia, rather than through a separate proceeding under this section.

20VAC5-335-80. Permitting of non-utility energy storage facilities.

A. Other than a Phase I or Phase II Utility, each person seeking to construct and operate an energy storage facility in the Commonwealth with an energy storage power rating of [~~100 kilowatts~~ 1 megawatt] or greater, either on a stand-alone basis or on an aggregated basis facilitated by an energy storage aggregator, shall either (i) obtain a permit from the commission pursuant to this section, or (ii) apply for and receive a certificate of public convenience and necessity from the commission pursuant to § 56-580 of the Code of Virginia for the energy storage facility, prior to commencing construction or operation. If such person applies for and receives a certificate of public convenience and necessity from the commission, a permit [under this section] shall not be required.

B. In evaluating a permit application, the commission shall make a determination for approval based upon a finding that the energy storage facility (i) will have no material adverse effect upon reliability of electric service provided by any regulated public utility; (ii) does not adversely impact any goal established by the Virginia Environmental Justice Act (§§ 2.2-234 et seq. of the Code of Virginia); and (iii) is not otherwise contrary to the public interest.

C. Other than a Phase I or Phase II Utility, each person applying for a permit to construct and operate an energy storage facility with an energy storage power rating of 100 kilowatts or greater shall file an application with the clerk of the commission. If the applicant becomes aware of any material changes to any information while the application is pending, the applicant shall inform the commission of such changes within 10 calendar days. Applications shall include the following information:

1. Legal name of the applicant as well as any trade name.

2. A description of the applicant's authorized business structure, identifying the state authorizing such structure and the associated date (e.g., if incorporated, the state and date of incorporation; if a limited liability company, the state issuing the certificate of organization and the date of issuance).

3. Name and business addresses of all principal corporate officers and directors, partners, and LLC members, as appropriate.

4. Financial information for the applicant, or principal participant or participants in the project. If the applicant or principal participant or participants is a private entity, financial information should include an analysis of the entity's financial condition and audited financial statements for the two most recent fiscal years. If the applicant or principal participant or participants is a public company, financial information should include a copy, or a link to where a copy can be found on the internet, of the entity's most recent stockholder report and most recent Securities and Exchange Commission Form 10 K. If such information is unavailable, provide evidence that applicant has the financial resources, or access to capital, necessary to complete the proposed project.

5. A discussion of the applicant's qualifications, including:

a. A summary of other projects developed and managed by the applicant. Include location, status, and operational history.

b. A description of any affiliation or affiliations with an incumbent electric utility as defined in § 56-576 of the Code of Virginia.

c. A disclosure of any affiliate relationship with any other permit holder.

6. Specific information about the site for the proposed facility, including:

a. A written description of the location including identification of the city or county in which the facility will be constructed. Such description should be suitable for newspaper publication and sufficiently identify any affected areas.

b. A description of the site, and a topographical map depiction of the proposed site.

c. The status of site acquisition (e.g., purchase option, ownership).

d. A description of any applicable local zoning or land use approvals required and the status of such approvals.

7. Specific information about the proposed facility, including:

a. Description of all major systems, including energy storage technology type and battery storage chemistry type (if applicable), intended uses, intended facility useful life, facility configuration, and expected suppliers of major components.

b. Energy storage power rating, energy capacity, and storage duration.

c. Estimated costs, and schedule for construction, testing and commercialization.

d. Site layouts that provide for integration of energy storage systems with adequate spacing and property setback requirements incorporated.

e. Codes and standards to which the proposed facility will be constructed.

f. Where applicable, the manner and location of the facility's interconnection to the transmission or distribution grid.

8. A general discussion of the selection process for the energy storage technology, including a description of any competitive procurement processes used.

9. A general discussion of economic development impacts of the project.

10. A list of other local, state or federal government agencies whose requirements must be met in connection with the construction or operation of the project and a statement of the status of the approval procedures for each of these agencies.

11. An analysis of the environmental impact of the project. This analysis shall include the impacts on the environment and natural resources, analysis of alternatives considered, unavoidable adverse impacts, mitigation measures proposed to minimize unavoidable impacts, and any irreversible environmental changes. The information required by this subdivision shall be submitted to the Department of Environmental Quality, simultaneously with its filing with the commission, for coordination and review by state agencies responsible for environmental and natural resource protection. [To the extent any of the following information is not applicable to a particular project or technology, the applicant shall indicate it is not applicable.] The information shall identify:

a. Required air permits, expected restrictions, expected emissions, rates of emissions, and any needed emissions offsets or allowances.

b. Required permits for water withdrawals, expected restrictions, the amount of water estimated to be used, the source of such water, identification of a backup source of water, if any, and identification of any facilities that need to be constructed to provide such water.

c. Required permits for water discharge and potential impacts on regional water flows.

d. Required permits related to the wetlands and an identification of any tidal and nontidal wetlands located near the proposed site and how such wetlands will be impacted by applicant's proposed facility.

e. Impact of solid and hazardous wastes on local water resources.

f. Impact on natural heritage resources, and on threatened and endangered species.

g. Erosion and sediment control measures.

h. Archaeological, historic, scenic, cultural, or architectural resources in the area.

i. Chesapeake Bay Preservation Areas designated by the locality.

j. Wildlife resources.

k. Agricultural and forest resources and federal, local, state or private parks and recreation areas.

l. Use of pesticides and herbicides.

m. Geology and mineral resources, caves, and sinkholes.

n. Transportation infrastructure.

12. An analysis of the social impact of the project, including a general discussion of why the facility will not have a disproportionate adverse impact on "historically economically disadvantaged communities" as defined in § 56-576 of the Code of Virginia.

13. A general discussion of how the project will promote environmental justice in environmental justice communities and fenceline communities consistent with the Virginia Environmental Justice Act (§§ 2.2-234 et seq. of the Code of Virginia).

14. A general discussion of reliability impacts including:

a. A description of interconnection requirements and needed interconnection facilities. Any such facilities shall be depicted on a topographic map.

b. A description of the potential impact of the proposed facility on the interconnected system. Discussion should identify and summarize any system impact studies or proposed studies.

c. A description of anticipated services that may be provided to any transmission service provider or local distribution company, including associated costs and benefits.

d. A discussion of existing and expected generation reserves in the region and the impact of the proposed facility on such reserves.

15. A discussion of safety measures the applicant will implement, including fire and explosion protection, detection and mitigation measures, and an emergency response plan, as well as a discussion of whether such measures are compliant with all applicable codes and standards.

16. A discussion of the projected useful life of the energy storage facility, including known or projected performance degradation, roundtrip efficiency, and the proposed plan for and cost of decommissioning at the end of the facility's useful life.

17. A discussion of whether the proposed facility is not contrary to the public interest. The discussion shall include, but is not limited to, an analysis of any reasonably known impacts the proposed facility may have upon reliability of service to, and rates paid by, customers of any regulated public utility providing electric service in the Commonwealth.

Any application that fails to conform to the requirements shall be incomplete. No action shall be taken on any application until deemed complete and filed.

Upon receipt of a complete permit application pursuant to this section, the commission shall enter an order providing notice to appropriate persons and an opportunity to comment on the application. The commission shall issue a permit for construction and operation of the energy storage facility upon finding the applicant satisfies the requirements established by [subsection B of] this section.

D. Construction and operation of an energy storage facility in the Commonwealth with an energy storage power rating of less than 100 kilowatts may be undertaken without complying with the filing requirements established by this section. Persons desiring to construct and operate such facilities shall (i) submit a letter stating the location, size, and technology of the energy storage

facility to (a) the Director of the commission's Division of Public Utility Regulation, and (b) the utility in whose certificated service territory the energy storage facility is located; and (ii) comply with all other requirements of federal, state, and local law.

E. In addition to the requirements of this section, each person seeking to operate an energy storage facility must complete either the interconnection process required by the commission's Regulations Governing Interconnection of Small Electrical Generators and Storage (20VAC5-314) or any [~~federally~~ federally-] approved [interconnection] process [~~established by the regional transmission organization~~] .

F. Within 30 days of any transfer or assignment of an energy storage facility for which a permit was granted by the commission, the permit holder shall notify the commission and the utility in whose certificated service territory the energy storage facility is located of such transfer or assignment. The notice shall include: (i) the date of transfer or assignment; (ii) the information required in subdivision C 1 through C 5 of this section for the new permit holder; and (iii) a declaration by the new permit holder that it agrees to abide by all initial and continuing requirements of the permit.

G. Any person receiving a permit to operate an energy storage facility in the Commonwealth pursuant to this section shall comply with all initial and continuing requirements of the commission's permitting process. Should the commission determine, upon complaint of any interested person, the Attorney General, upon staff motion, or its own motion, that a permitted operator of an energy storage facility has failed to comply with any of the requirements of this section or a commission order, the commission may, after providing due notice and an opportunity for a hearing, suspend or revoke the permit or take any other actions permitted by law or regulations as it may deem necessary to protect the public interest.

20VAC5-335-90. Licensing of energy storage aggregators.

A. Other than a Phase I or Phase II Utility, each person seeking to conduct business as an energy storage aggregator shall obtain a license from the commission prior to commencing operations.

B. Each person applying for a license to conduct business as an energy storage aggregator shall file an application with the clerk of the commission. If the applicant becomes aware of any material changes to any information while the application is pending, the applicant shall inform the commission of such changes within 10 calendar days. Applications shall include the following information:

1. Legal name of the applicant as well as any trade name.

2. A description of the applicant's authorized business structure, identifying the state authorizing such structure and the associated date (e.g., if incorporated, the state and date of incorporation; if a limited liability company, the state issuing the certificate of organization and the date of issuance).

3. Name and business addresses of all principal corporate officers and directors, partners, and LLC members, as appropriate.

4. Physical business addresses and telephone numbers of the applicant's principal office and any Virginia office location or locations.

5. Whether the applicant is an affiliate of a Phase I or Phase II Utility. If so, the application shall further provide a description of internal controls the applicant has designed to ensure that it and its employees, contractors, and agents that are engaged in the (i) merchant, operations, transmission, or reliability functions of the electric generation systems, or (ii) customer service, sales, marketing, metering, accounting or billing functions, do not receive information from the utility or from entities that provide similar functions for or on

behalf of the utility as would give the affiliated energy storage aggregator an undue advantage over non-affiliated energy storage aggregators.

6. A list of states in which the applicant or an affiliate conducts business as an energy storage aggregator, the names under which such business is conducted, and a description of the businesses conducted.

7. Toll-free telephone number of the applicant's customer service department.

8. Name, title, address, telephone number, and e-mail address of the applicant's liaison with the commission.

9. Name, title, and address of the applicant's registered agent in Virginia for service of process.

10. If a foreign corporation, a copy of the applicant's authorization to conduct business in Virginia from the commission or if a domestic corporation, a copy of the certificate of incorporation from the commission.

11. Sufficient information to demonstrate, for purposes of licensure with the commission, financial fitness commensurate with the service or services proposed to be provided. Applicant shall submit the following information related to general financial fitness:

a. If available, applicant's audited balance sheet and income statement for the most recent fiscal year and published financial information such as the most recent Securities and Exchange Commission forms 10-K and 10-Q. If not available, other financial information for the applicant or any other entity that provides financial resources to the applicant.

b. If available, proof of a minimum bond rating (or other senior debt) of "BBB-" or an equivalent rating by a major rating agency, or a guarantee with a guarantor possessing

a credit rating of "BBB-" or higher from a major rating agency. If not available, other evidence that will demonstrate the applicant's financial responsibility.

12. The name of the utility certificated to provide service in the area in which the applicant proposes to provide service, the type of service or services the applicant proposes to provide, and the class of customers to which the applicant proposes to provide such services.

13. The following information related to the applicant's fitness to operate as an energy storage aggregator:

a. Disclosure of any (i) civil, criminal, or regulatory sanctions or penalties imposed or in place within the previous five years against the company, any of its affiliates, or any officer, director, partner, or member of an LLC or any of its affiliates, pursuant to any state or federal law or regulation; and (ii) felony convictions within the previous five years, which relate to the business of the company or to an affiliate, of any officer, director, partner, or member of an LLC.

b. Disclosure of whether any application for license or authority to conduct the same type of business as it proposes to offer in Virginia has ever been denied, and whether any license or authority issued to it or an affiliate has ever been suspended or revoked and whether other sanctions have been imposed.

c. If the applicant has engaged in the provision of energy storage aggregation in Virginia or any other state, a report of all instances of violations of reliability standards that were determined to be the fault of the applicant, including unplanned outages, failure to meet service obligations, and any other deviations from reliability standards during the previous three years. The report shall include, for each instance, the following information: (i) a description of the event; (ii) its duration; (iii) its cause; (iv)

the number of customers affected; (v) any reports, findings or issuances by regulators or electric and natural gas system reliability organizations relating to the instance; (vi) any penalties imposed; and (vii) whether and how the problem has been remedied.

14. A $250 registration fee payable to the commission.

15. A discussion of the proposed use or uses of the aggregated resources, including the nature of the intended participation in wholesale electric markets, if any.

16. Sufficient information to demonstrate technical fitness commensurate with the service to be provided, to include:

a. The applicant's experience.

b. Identity of applicant's officers and key managers with direct responsibility for the business operations conducted in Virginia and their experience in the provision of storage aggregation.

c. Documentation of the applicant's membership or participation in regional reliability councils or regional transmission organizations, if any.

d. Billing service options the applicant intends to offer and a description of the applicant's billing capability including a description of any related experience.

17. A copy of the applicant's dispute resolution procedure.

18. The standards of conduct to which the applicant adheres or agrees to adhere to.

An officer with appropriate authority, under penalty of perjury, shall attest that all information supplied on the application for licensure form is true and correct, and that, if licensed, the applicant will abide by all applicable regulations of the commission.

C. Any application that fails to conform to the requirements herein, shall be regarded as incomplete. No action shall be taken on any application until deemed complete and filed.

D. Upon receipt of an application for a license to conduct business as an energy storage aggregator, the commission shall enter an order providing notice to appropriate persons and an opportunity for comments on the application. The commission shall issue a license to conduct business as an energy storage aggregator upon finding the applicant satisfies the requirements established by this section.

E. A license to conduct business as an energy storage aggregator granted under this section is valid until revoked or suspended by the commission after providing due notice and an opportunity for a hearing, or until the energy storage aggregators abandons its license.

F. An energy storage aggregator shall comply with all initial and continuing requirements of the commission's licensure process and any reasonable registration processes required by the utility or utilities in whose certificated service territory the energy storage aggregator intends to operate. Should the commission determine, upon complaint of any interested person, the Attorney General, upon staff motion, or its own motion, that an energy storage aggregators has failed to comply with any of the requirements of this section or a commission order, the commission may, after providing due notice and an opportunity for a hearing, suspend or revoke the energy storage aggregator's license or take any other actions permitted by law or regulations as it may deem necessary to protect the public interest.

20VAC5-335-100. Energy storage aggregator registration with utility.

A. An energy storage aggregator shall submit to the utility or utilities in whose certificated service territory it intends to operate proof of licensure from the commission to provide energy storage aggregation services in the Commonwealth. An energy storage aggregator shall provide notice of any suspension or revocation of its license to the utility or utilities upon issuance of the suspension or revocation by the commission.

B. An energy storage aggregator and the utility or utilities shall exchange the names, telephone numbers, and e-mail addresses of appropriate internal points of contact to address operational and business coordination issues, and the names and addresses of their registered agents in Virginia.

20VAC5-335-110. Marketing by energy storage aggregators.

A. An energy storage aggregator shall provide accurate, understandable information in any advertisements, solicitations, marketing materials, or customer service contracts, in a manner that is not misleading. Marketing material found misleading by the commission will be withdrawn [by the energy storage aggregator from its published materials] .

B. Customer service contracts shall include:

1. Explanations of the price for the energy storage aggregator's services or, if the exact price cannot feasibly be specified, an explanation of how the price will be calculated;

2. Explanations of how the customer will be compensated for the value of their energy storage;

3. Length of the service contract, including any provisions for automatic contract renewal;

4. Provisions for termination by the customer and by the energy storage aggregator;

5. A statement of any minimum contract terms, minimum or maximum storage requirements, minimum or fixed charges, and any other charges;

6. Applicable fees including, but not limited to, start-up fees, cancellation fees, late payment fees, and fees for checks returned for insufficient funds;

7. A notice of any billing terms and conditions;

8. A toll-free telephone number and an address for inquiries and complaints;

9. In a conspicuous place, confirmation of the customer's request for enrollment and the approximate date the customer's service shall commence;

10. A notice that, upon request by the customer, the energy storage aggregator shall provide a copy of its dispute resolution procedure; and

11. A notice that, upon any change in the terms and conditions of the contract, including any provisions governing price or pricing methodology, or assignment of the contract to another energy storage aggregator, the energy storage aggregator shall communicate such changes to the customer at least 30 days in advance of implementing such changes.

20VAC5-335-120. Confidentiality.

Where any application filed under this chapter, including any supporting documents or pre-filed testimony, contains information that the applicant asserts is confidential, the filing may be made under seal and accompanied by a motion for a protective order or other confidential treatment in accordance with 5VAC5-20-170 of the commission's Rules of Practice and Procedure (5VAC5-20).

20VAC5-335-130. Waiver.

A. Any request for a waiver of any provision in this chapter may be granted upon such terms and conditions as the commission may impose.

B. For good cause shown, any Phase I and Phase II Utility may request a waiver of the commission's Rules Governing Utility Promotional Allowances (20VAC5-313) for any proposed programs or incentives related to energy storage set forth in 20VAC5-335-50 through 20VAC5-335-70 of this chapter.

C. For good cause shown, any Phase I and Phase II Utility may request a waiver of the commission's Regulations Governing the Functional Separation of Incumbent Electric Utilities under the Virginia Electric Utility Restructuring Act (20VAC5-202).